Complete Summary

GUIDELINE TITLE

Management of hyperlipidemia.

BIBLIOGRAPHIC SOURCE(S)

Michigan Quality Improvement Consortium. Management of hyperlipidemia. Southfield (MI): Michigan Quality Improvement Consortium; 2003 Aug. 1 p.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Hyperlipidemia

GUIDELINE CATEGORY

Management
Risk Assessment
Treatment

CLINICAL SPECIALTY

Cardiology
Family Practice
Internal Medicine

GUIDELINE OBJECTIVE(S)

- To achieve significant, measurable improvements in the management of hyperlipidemia through the development and implementation of common evidence-based clinical practice guidelines

- To design concise guidelines that are focused on key management components of hyperlipidemia to improve outcomes

TARGET POPULATION

Patients age ≥18 years with low density lipoprotein (LDL) >100

INTERVENTIONS AND PRACTICES CONSIDERED

Risk Assessment

1. Initial fasting lipid profile (total, low-density lipoprotein [LDL], high-density lipoprotein [HDL], triglycerides)
2. Assessment of major risk factors and coronary heart disease (CHD) risk factors
3. Calculation for short-term risk using Framingham projection of 10-year absolute risk

Management/Treatment

1. Patient/family education including risk factor modification
2. Pharmacologic intervention
3. Referral to lipid management clinic, if necessary

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The Michigan Quality Improvement Consortium (MQIC) project leader conducts a search of current literature in support of the guideline topic. Computer database searches are used to identify published studies and existing protocols and/or clinical practice guidelines on the selected topic. A database such as MEDLINE and two to three other databases are used.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence for the Most Significant Recommendation

A. Randomized controlled trials
B. Controlled trials, no randomization
C. Observational studies
D. Opinion of expert panel

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Using the health plan guideline summaries and information obtained from the literature search, the Michigan Quality Improvement Consortium (MQIC) director and/or project leader prepare a draft guideline for review by the MQIC Medical Directors.

The draft guideline and health plan guideline summaries are distributed to the MQIC Medical Directors for review and discussion at their next committee meeting.

The review/revision cycle may be conducted over several meetings before consensus is reached. Each version of the draft guideline is distributed to the MQIC Medical Directors, Measurement, and Implementation committee members for review and comments. All feedback received is distributed to the entire membership.

Once the MQIC Medical Directors achieve consensus on the draft guideline, it is considered approved for external distribution to practitioners with review and comments requested.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Once the Michigan Quality Improvement Consortium (MQIC) Medical Directors achieve consensus on the draft guideline, it is considered approved for external distribution to practitioners with review and comments requested.

The MQIC director also forwards the approved guideline draft to presidents of the appropriate state medical specialty societies for their input. All feedback received from external reviews is presented for discussion at the next MQIC Medical Directors Committee meeting. In addition, physicians are invited to attend the committee meeting to present their comments.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The level of evidence grades (A-D) are provided for the most significant recommendations and are defined at the end of the "Major Recommendations" field.

Risk Assessment

- Screening: Initial fasting lipid profile (i.e., total, low-density lipoprotein [LDL], high-density lipoprotein (HDL), triglycerides); if normal repeat every five years [D]
- Treatment is based on LDL, major risk factors, and presence of coronary heart disease (CHD) or equivalent.

Major Risk Factors

- Cigarette smoking
- Hypertension (blood pressure [BP] $\geq$140/90)
- On antihypertensives, regardless of current BP levels
- HDL: <40 for men; <50 for women (HDL $\geq$60 = negative risk factor)
- Family history (first degree) of premature CHD (men <55 years; women <65 years)
- Age (men $\geq$45 years; women $\geq$55 years)

CHD Risk Equivalents

- Other clinical forms of atherosclerotic disease (e.g., peripheral arterial disease, abdominal aortic aneurysm, and/or symptomatic carotid artery disease)

- Diabetes
- Multiple risk factors confer a 10-year risk for CHD >20%
- CHD and CHD risk equivalents give a >20% risk of a CHD event within 10 years

Risk Stratification

- Calculate short-term risk for patients with 2+ risk factors using the Framingham projection of 10-year absolute risk [D]:

Categorical Risk	Goal for LDL	LDL to Begin Therapeutic Lifestyle Change (TLC)	LDL to Consider Starting Drug Therapy
CHD or CHD risk equivalents 10-year risk: ≥20%	<100 mg/dL	≥100 mg/dL	≥100 mg/dL
2+ risk factors 10-year risk: ≤20%	<130 mg/dL	≥130 mg/dL	≥130 mg/dL for 10 year risk: 10 – 20% ≥160 mg/dL for 10 year risk: <10%
0 – 1 risk factor	<160 mg/dL	≥160 mg/dL	≥190 mg/dL (drug therapy optional for levels 160-189 mg/dL)

Education and Risk Factor Modification

Educate patient/family regarding

- Reduce saturated fats and cholesterol, increase plant stanols/sterol to 28 g/day (e.g., cholesterol-lowering margarines), increase viscous soluble fiber to 10 to 25 g/day (e.g., oats, barley, lentils, beans).
- Decrease weight and increase exercise to moderate level of activity for 30 minutes most days of the week [A].

Pharmacologic Interventions

- Therapeutic Lifestyle Change (TLC) and/or drug therapy may be initiated based on the LDL level and/or presence of CHD risk or CHD risk factors.
- Consider drug therapy when the LDL is not at goal by 6 to 8 weeks after TLC has begun in earnest.

- Statins are the most commonly used lipid-lowering agents. Liver function test monitoring is recommended for 12 weeks following treatment initiation, or dosage increases, of any statin.
- Evaluate and adjust drug therapy at 6 to 8 week intervals.
- For patients who do not reach LDL goal, add fibrate or nicotinic acid and consider referral to lipid management clinic.

Definitions:

Levels of Evidence for the Most Significant Recommendation

A. Randomized controlled trials
B. Controlled trials, no randomization
C. Observational studies
D. Opinion of expert panel

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is provided for the most significant recommendations (See "Major Recommendations" field).

The guideline is based on the 2001 National Cholesterol Education Program (NCEP) Expert Panel Report on Detection, Evaluation and Treatment of High Blood Cholesterol In Adults (Adult Treatment Panel III) (www.nhlbi.nih.gov).

DATE RELEASED

2003 Aug

GUIDELINE DEVELOPER(S)

Michigan Quality Improvement Consortium

SOURCE(S) OF FUNDING

Michigan Quality Improvement Consortium

GUIDELINE COMMITTEE

Michigan Quality Improvement Consortium Medical Director's Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Physician representatives from participating Michigan Quality Improvement Consortium health plans, Michigan State Medical Society, Michigan Osteopathic Association, Michigan Association of Health Plans, Michigan Department of Community Health and Michigan Peer Review Organization

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Michigan Quality Improvement Consortium Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on April 14, 2004. The information was verified by the guideline developer on July 27, 2004.

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Date Modified: 11/15/2004